



Alchemy Industrial Power Quality Study Offering: 30-Day Load Study

When considering an energy storage solution, a power quality study is a good first step to understand your current system performance and the existing load profile. From the data collected, Alchemy can improve the BESS design to suit your load parameters, as well as determine the opportunity for peak load shaving, arbitrage, etc. Below is a brief outline of the how the study would be conducted and what data would be used.

How Is the Study Conducted?

The Alchemy Industrial team will perform the study with a Fluke Logger 1738, a three-phase harmonics and event recording device, following the outlined steps below:

- 1 Hook up measuring device to the feeders or service**
 - Connect the Fluke Logger to lone power and secure the area so it will not be tampered with
- 2 Set power system parameters**
 - Configure the Network Topology to match the system being recorded and verify the line frequency and nominal voltage are correct
- 3 Set the recording time**
 - Set the Fluke Logger to record every 15-minute averages over a 30-day duration, resulting in 2,880 individual measurements
- 4 Record the data**
 - The Fluke Logger will display and record power (Watts), reactive power (vars), apparent power (Vas), power factor and energy (Kwh)
- 5 Download and review the measurements**
 - Use application software to graph the data, determining max current or power on each phase, and inform the BESS design

How Is the Data Gathered?



The Fluke Logger 1738: Three-Phase Harmonics and Event Recording

The Fluke 1738 is the chosen tool for electricians trying to record and analyze power and energy data in commercial and industrial facilities.

- Shows voltage and current waveforms on its integrated scope display
- Generates phasor diagrams for three-phase systems
- Measures and monitors harmonic distortion caused by electronic loads
- Captures detailed information on voltage dips and swells caused by load switching and faulty equipment